



Final Draft

Annual Survey Report

ADRA Development Food Assistance Program (DFAP)

Eastern Democratic Republic of Congo (DRC)

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**Dawit Habtemariam
Evaluations
ADRA INTERNATIONAL
12501 OLD COLUMBIA PIKE
SILVER SPRING, MARYLAND 20904
UNITED STATES OF AMERICA**

Email: dawit.habtemariam@adra.org

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Dawit Habtemariam
Survey Director

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LIST OF ACRONYMS

| | |
|--------|--|
| ADRA | Adventist Development and Relief Agency |
| AIDS | Acquired Immune Deficiency Syndrome |
| CS | Cooperating Sponsor |
| DFAP | Development Food Aid Program |
| FC | Franc Congolese |
| FS | Food Security |
| FFP | Food for Peace office of USAID |
| FFW | Food for Work |
| FY | Fiscal Year |
| Ha | hectare |
| HIV | Human Immunodeficiency Virus |
| HN | Health and Nutrition |
| HQ | ADRA International Headquarters |
| IDP | Internally Displaced Persons |
| IR | Intermediate Result |
| Km | kilometer |
| LOP | Life of Project |
| M&E | Monitoring and Evaluation |
| MF | Model Farmers |
| MOA | Ministry of Agriculture |
| MOH | Ministry of Health |
| KG | Kilograms |
| NGO | Non-Governmental Organization |
| NRM | Natural Resource Management |
| PL | United States Public Law |
| PVO | Private Voluntary Organization |
| RS | Random Sampling |
| SO | Strategic Objective |
| SPSS | Statistical Package for the Social Services |
| STI | Sexually Transmitted Infection |
| UN | United Nations |
| UNICEF | United Nations Children's Fund |
| USAID | United States Agency for International Development |
| USD | United States Dollar |

EXECUTIVE SUMMARY

In August 2011, the Adventist Development and Relief Agency (ADRA) International and United States Agency for International Development (USAID) signed a cooperative agreement to finance the Development Food Assistance Program (DFAP) in Fizi, Kalehe and Uvira territories, South Kivu province of eastern Democratic Republic Congo (DRC). ADRA has, in turn, entered into a partnership with World Vision (WV) and John Hopkins Bloomberg school of Public Health. The project's name is JENGA JAMAA II, a Kiswahili word, meaning "Building the strength of communities". With a total funding of more than 50 million USD, the goal of the project is to increase household livelihood resiliency among vulnerable population. Implementation of JENGA II will continue until August 2016. In 2012, a population-based baseline was conducted, inter alia, to establish baseline values for all outcome and impact indicators of JENGA II.

ADRA and WV carried out field work for the annual survey during July 8-19, 2013. This annual beneficiary-based survey report intends to inform stakeholders of JENGA II and to document the achievement of annual outcomes. The survey provides stakeholders with current quantitative estimates of the household food security outcomes in the target areas. It is expected this report will be a key input in the annual review of the project and detailed implementation planning for the coming years. A total of 1090 beneficiary-household interviews were conducted covering the three target territories. Interviewers used a Kiswahili questionnaire which was reviewed and pre-tested on 4, July 2013. Seventy personnel were trained for about four days. The survey personnel collected and entered data in eight days, during July 8-19, 2013. Statistical package for social sciences (SPSS) was used for data entry, cleaning and analysis.

The survey data analysis reveals the following:

Outcomes in the agricultural production and marketing showed mixed results. Agricultural productivity is limited, among other factors, by the relatively small land holding by farming households. The average size of land ownership is (0.59) hectares. Yield levels for major target crops, calculated as kilograms per unit of hectare of land cultivated, are cassava (5612 kg/ha), maize (1672kg/ha), groundnuts (1,519 kg/ha), beans (1085 kg/ha), rice (4,426 kg/ha) and banana (3,028 kg/ha). The level of irrigation practices is very low. Only (5.6%) responded that they have land under irrigation. The percentage of beneficiaries (individual farmers) using at least four of sustainable agriculture technologies is (13.8%) of which (79.5%) are women and (20.5%) are men. Kalehe accounted for 51.4% while Fizi and Uvira registered 25% each. The survey points out that (22.2%) reported to have bananas that were affected by BXW and (57.3%) reported to have cassava that was affected by cassava mosaic disease during recent growing season. Almost six farmers in ten, (59.5%) used at least one of the improved storage techniques promoted by the project in the last post-harvest period, with male (22.9%) and female (77.1%). The percent of farmers who participated in post-

harvest value chain activities in the most recent growing season as expressed by joint sales with other farmers is (35.9%) of those farmers who reported they sold crops.

JENGA II has registered relatively more positive outcomes in Health, Nutrition, and Water, Sanitation and Hygiene (WASH) activities. The percentage of mothers of children age 0-23 months who had four ANC visits when they were pregnant of the youngest child is (53.6%). The survey indicates (55.8%) of caregivers recall that their child had fever, (17.4%) were treated with an effective anti-malarial drug within 24 hours for the most recent episode of fever. Of the (59.5%) of children under five who had diarrhea, in the two weeks prior to the survey and (66.8%) received treatment with home-made ORS and (37.2%) received prepackaged ORS. The survey points out that 79.3% of caregivers recalled taking their children under the age of 5 years to an appropriate health provider for the most recent episode of ARI symptoms. When children had an illness with a cough, (43%) have trouble breathing or breathe faster than usual with short, fast breaths and (79.3%) of their caregivers sought advice from health practitioner such as nurse (49.2%), doctor (19.5%), auxiliary nurse (13%), and trained Community Health Worker (CHW) (6.9%). At the time of the survey (96.6%) reported practicing breastfeeding and (85.1%) of children under 6 months did not consume any food other than breastfeeding. The average number of food groups consumed by women aged 15-49, is 3.15 with a maximum of 9 food groups. The average child dietary diversity score (CDDS) for children 6- 23 months of age is 2.88. The maximum reported score was 8. The survey indicates (28.8%) of households are using an improved drinking water source and (31.3%) of households using an improved sanitation facility. It also shows 85.6% of the respondents were caregivers of children under two years and (13.1%) of them live in a household with soap and water at a hand washing station.

The annual survey shows the percentage of women using appropriately at least one of non- agricultural IGA's strategies promoted by the project (brick production) is (64.6%). The percentage of women managing at least one of the IGA promoted by the project is (28.9%). The percentage of women in the beneficiary communities aged 15-49 who experienced physical violence from an intimate partner in the past 12 months 24.05%. Over two third (64.6%) responded that they have been involved in a decision making in a local community organization. (95.9%) have participated in a literacy program and 68.7% can write or read. Over three quarter (75.6%) reported that labor saving techniques have reduced their workload. The percentage of women using at least one labor saving skills promoted by the project is (70.3%).

The annual survey noted that the percentage of female respondents for the agricultural component was three fold more than male respondents. Moreover, the percentage of exclusive breastfeeding is almost twice the value of the baseline. Further research is recommended in this indicator value as well.

I. PROJECT OVERVIEW

1.1. Introduction

ADRA is an international non-governmental organization (NGO) operating in over 120 countries worldwide. In partnership with other cooperating sponsors (CSs) such as World Vision, donor agencies such as USAID, host communities, and local governments, ADRA provides development and relief assistance to people in need regardless of ethnicity, gender, religious or political affiliation. Broadly stated, the goal of ADRA is to improve the well-being of people in need through food security, health, education, economic growth, and disaster relief response projects. World Vision is an Evangelical Christian Humanitarian aid, development, and advocacy organization dedicated to working with children, families and communities to overcome poverty and injustice. ADRA and World Vision have previously cooperated in other countries including Rwanda and Mozambique.

Since July 2011, ADRA, in collaboration with World Vision and Johns Hopkins University, has been implementing its food security project in Fizi, Kalehe and Uvira territories of South Kivu, (east DRC). This five-year DFAP aims at sustainably reducing food insecurity among vulnerable households of 258,700 beneficiaries. With a total USAID funding of \$52 million, the project is expected to end in June 2016. Based on the experience of JENGA I, a three year phase (2008-2011), the current project has benefited from a using experiences of former staff, offices and other logistical capacity without the need to start from scratch. While the security environment is still fragile, physical infrastructure, roads, water and electricity supply are also poor. All these factors are exogenous risks to the performance of the project.

The Evaluation Office at ADRA International is responsible for the smooth organization, coordination, design and execution of surveys and evaluations of programs funded by US Government and implemented by ADRA⁸⁹ The purpose of the annual beneficiary-based survey is to provide a quantitative survey report as part of the annual performance monitoring, reporting and evaluation. The survey presents current estimates of quantitative outcome indicators for the project. Additionally, it aims at gathering needed information on these indicators to the stakeholders about the target population so that interventions can be better planned and implemented.

1.2. Geographic Location

The Democratic Republic of Congo (DRC) is the second largest country in the continent of Africa. It borders the Central African Republic, South Sudan, Uganda, Rwanda, Burundi, Zambia and Angola, the Republic of the Congo, and is separated from Tanzania by Lake Tanganyika on the east. With a population of over 75 million, the DRC is the nineteenth most populous nation in the world, and the fourth most populous nation in Africa.

The food security project is located in Fizi, Kalehe and Uvira territories of the south Kivu province of eastern DRC. According to the cooperative agreement, the target geographic area is divided between ADRA, implementing project activities in Fizi and Uvira, and World Vision in Kalehe. The populations of the three

territories are estimated to be 220,000, 235,000 and 245,000 respectively, providing a total population of 700,000. The project was proposed to reach about 35% of the population.

1.3. Socio-economic Context

United Nations' information sources indicate that DRC is endowed with natural resources, ecotourism, biodiversity and significant deposits of tantalum. DRC is the world's largest producer of cobalt and a major producer of Colton, copper and industrial diamonds. However, the country is economically poor with a per capita income of about \$800 per annum. The majority of the population lives under abject poverty that has resulted from bad governance, corruption and devastating civil wars that claimed over five million deaths. Eastern DRC is prone to fragile peace causing setbacks to economic growth and food security. The scope and depth of the security situation in east DRC remains a major challenge. Large structural problems, such as the remoteness of villages, rough road network and transport system weaken the resilience of the populations. Dependency of the population on foreign assistance is high.

Agriculture is the main stay of the economy constituting over 80% of the rural populations income and employment. The subsistence farming-based economy supports a majority of the labor force. In addition to climatic risks of rain fed agriculture, the small-scale producers confront shortage of availability and access to agriculturally productive land, a low level of technology and technical support, inadequate ability to capitalize their resources, and limited capacity for integration into markets. According to the United Nations statistics, life expectancy at birth is 58 years. The principal diseases affecting mortality are malaria, dengue, HIV/AIDS, STIs, diarrhea and respiratory infections. Infectious diseases and complications from pregnancy and birth are major determinants affecting mortality in females.

1.4. JENGA II Project Objectives (covered by the Annual Survey)

The key strategic objectives and intermediate results of JENGA II are summarized as follows:

| |
|---|
| SO1: Food insecure farming households with increased incomes |
| IR 1.1: Increased agricultural productivity and diversified production of smallholder farmers |
| IR 1.2: Enhanced commercialization of agriculture products of smallholder farmers |
| IR 1.3: Enhanced community resilience to food security shocks |
| SO2: Improved health and nutritional status of children under 5 |
| IR 2.1: Improved maternal health and nutritional status |
| IR 2.2: Improved infant and young child feeding practices |
| IR 2.3: Improved management of childhood illnesses of household and communities |
| SO3: Increased women's empowerment in food insecure households and communities |
| IR 3.1: Diversified livelihoods of women |
| IR 3.2: Reduced GBV in communities |
| IR 3.3: Increased gender awareness within households and communities |
| IR 3.4: Increased participation of women in community leadership |
| IR 3.5: Women's workload decreased |

1.5 Main Activities

Implementation of JENGA II project focuses on a variety of development activities including:

- Training and organizing farmers to expand commercialization
- Facilitate the development of MOA action plans for target territories
- Provide technical training to extension workers and other MOA staff
- Community outreach, gender empowerment, health, WASH and nutrition awareness training
- Training of farmers using demonstration plots for crop production cycle
- Introduce integrated pest management systems
- Promote improved food storage facilities
- Rehabilitate irrigation canals and feeder roads
- Provide training on improved soil conservation and agro-forestry techniques
- Tree planting for reforestation

II. ANNUAL SURVEY

The monitoring and evaluation (M&E) plan of the project identified a number of outcome indicators to track status and progress toward the achievement of intermediate results. The annual survey aims at providing project stakeholders with the current quantitative estimates of the food security outcome indicators for JENGA II. It is expected that the results of the survey shall be used as key input for the detailed implementation review and planning, and performance monitoring.

2.1. Survey Instrument

A desk review was carried out covering relevant project documents and other relevant references. The baseline survey questionnaire was revised to cover the outcome indicators only. A second review of the Kiswahili version was performed presented during the survey training to survey supervisors and enumerators. The survey team discussed what does each question meant, and why it is important for this annual survey and understood how to ask each question and mark response (s). The content of each question took into account potential respondents language, understanding and cultural sensitivity in the target area. Finally, the questionnaire was pre-tested and modifications were made before it was ready for data collection.

2.2. Sampling Size

Using a simple random sampling formula, the sample size was calculated to be to be 1089.

2.3. Data Collection

Training was provided in Uvira to the survey team composed of 70 JENGA II staff. The topic covered survey methodology, organization, understanding each question and responses in the questionnaire, interview techniques, and data quality assurance. The training also reviewed the role of supervisors; discussed proper, improper interviewing techniques to include obtaining informed consent, observed demonstration interviews, provided feedback about the interviews, and practiced conducting interviews. There were ten supervisors and 16 pairs of (male and female) interviewer who participated in the training. The average length of each interview was one hour. Each supervisor was responsible for managing the pairs of enumerators. Each enumerator was responsible for covering a minimum of three interviews every day. The survey team completed the data collection in eight days during July 8-19, 2013. It is worth noting that rough road network created difficulties in terms of accessing some of the communities.

2.4. Data Entry and Analysis

Using SPSS, data was entered by pairs of data entry clerks. Also, the same statistical software was used to clean and analyze the data. Data entry clerks were given a day of training and began data entry as the completed questionnaires arrived from the sample sites two days after the commencement of the data collection.

III. FINDINGS

3.1 DEMOGRAPHIC CHARACTERISTICS

The survey interviewed 252 respondent farming households in which the average age of the respondents is 38.5 years, while the youngest and oldest interviewees are 20 and 83 years old respectively. Of these, 94.4% represent respondents whose primary activity is agriculture. The proportions of male and female respondents are 21% and 79% revealing that the project area has a relatively high level of female participation in agriculture. In Fizi, Kalehe and Uvira, the female respondents are 80%, 82.5 and 74.1% respectively. It is recommended that JENGA conducts further study of this trend and document the implication of this finding as the majority of the respondents (86.5%) reported to be married, with another 8.3% saying they are widows. Of all the respondents 43.7% can read or write. Within Fizi, Kalehe and Uvira, percentages of respondents who can read or write are 42.9%, 53.8%, 34.6% respectively. Demographic information for health/nutrition and women empowerment are described under the respective sections.

3.2 AGRICULTURE -FARMING

JENGA II has activities aimed at increasing household agricultural productivity and diversified production of smallholder farmers. This includes selected crops that could provide the opportunity to diversify agricultural

production with a mix of cash and staple crops. The annual survey found the following average household yield (in kilograms/ha) for the six crops promoted by JENGA II.

Crop Yield

| | N | Mean |
|-------------|-----|----------|
| Maize | 172 | 1672.396 |
| Cassava | 229 | 5612.152 |
| Ground Nuts | 121 | 1519.818 |
| Beans | 111 | 1085.127 |
| Rice | 10 | 4426.111 |
| Banana | 9 | 3028.618 |

The average size of land holding per household is 0.59 hectares, with a maximum and minimum levels of 6.9 hectares and 0.0075 hectares respectively. Within the territories, Fizi accounted for average land holding of (0.508 ha) while Kalehe (0.551 ha) and Uvira (0.721ha). The majority (94.4%) responded that they don't have land under irrigation. The promotion of irrigation practices need to be reviewed in light of JENGA II activities in this component. JENGA II was proposed to construct 120 km of drainage canals that will make approximately 7,000 hectares available for agriculture use in the Kenya plain, in Fizi territory. To increase the amount of land under irrigation, JENGA II was also to rehabilitate 90 km of irrigation canals allowing more than 10,000 families to increase the production of marketable crops. The rate of adoption of improved farming technologies and techniques is an indicator for measuring increased use of improved agricultural practices. The percentage of beneficiaries (individual farmers) using (at least four) of sustainable agriculture technologies is 13.8% of which 79.5% are women and 20.5% are men. Kalehe accounted for 51.4% while Fizi and Uvira registered 25% each.

Farming Practices

| | Name of Territory | | | Total |
|----------------|-------------------|-------|--------|-------|
| | Fizi | Uvira | Kalehe | Fizi |
| >=technologies | 3 | 1 | 4 | 8 |
| | 0 | 0 | 4 | 4 |
| | 3 | 1 | 1 | 5 |
| | 0 | 1 | 2 | 3 |
| | 0 | 2 | 3 | 5 |
| | 0 | 0 | 2 | 2 |
| | 0 | 2 | 2 | 4 |
| | 1 | 0 | 0 | 1 |
| | 1 | 1 | 0 | 2 |
| | 0 | 1 | 0 | 1 |
| Total | 8 | 9 | 18 | 35 |

JENGA II aims at scaling up the introduction of mosaic-resistant cassava and promotion of cassava mosaic disease (CMD) management and banana Xanthomonas wilt (BXW) management practices. The goal is to reduce the incidence of CMD, and boosting crop yields. Close to six in ten (57.3%) reported to have cassava that was affected by cassava mosaic disease during the most recent growing season. Of this,

(25.5%) planted cassava resistant varieties, (61.3%) used removal of infested plants, and the remaining did nothing to use the recommended techniques. Female farmers represented eighty percent of those who planted cassava resistant varieties and twenty percent were male farmers who used the same technique. Over three in four, (76.2%) of the respondent who used removal of infested plants were female farmers and (23.8%) were male farmers.

Percentage of beneficiary farmers reporting being affected by CMD the last agricultural season

| | Frequency | Valid Percent | Cumulative Percent |
|---------|-----------|---------------|--------------------|
| Yes | 137 | 57.3 | 57.3 |
| No | 102 | 42.7 | 100.0 |
| Total | 239 | 100.0 | |
| Missing | 13 | | |
| Total | 252 | | |

The annual survey estimated the percentage of beneficiary farmers being affected by banana Xanthomonas wilt (BXW) during the last agricultural season who applied recommended improved techniques to control BXW in their fields disaggregated by sex.

Percentage of farmers who had bananas that were affected by BXW during recent growing season

| | Frequency | Valid Percent | Cumulative Percent |
|---------|-----------|---------------|--------------------|
| Yes | 54 | 22.2 | 22.2 |
| No | 189 | 77.8 | 100.0 |
| Total | 243 | 100.0 | |
| Missing | 9 | | |
| Total | 252 | | |

The survey shows (22.2%) reported to have bananas that were affected by BXW during the recent growing season. Of this, (75.9%) used removal of infested plants, and (1.9%) used certified banana suckers, the remaining did nothing to use the recommended techniques. Female farmers represented (78%) of those who used removal of infested plants and (22%) were male farmers who used the same technique. Only female farmers used certified banana suckers. JENGA II was designed to adopt a twofold approach for farmers affected by BXW: replace banana plants with other crops promoted within the project and replace infected plants with clean banana suckers.

Food storage

JENGA II trains farmers and associations in the main aspects of harvest and post-harvest handling during the harvest and post-harvest season. Technologies promoted will include plastic bags, clay pots and cribs for grains that minimize losses and potential theft. Almost six farmers in ten, (59.5%) used at least one of the improved storage techniques promoted by the project in the last post-harvest period male (22.9%) and female (77.1%). The percentage of metric tons of products sold that met the market standards will be

calculated by JENGAll as it may be available from project monitoring documentation or requires quality inspection by JENGA II marketing coordination staff.

Agricultural Marketing by smallholder farmers

Volume of agricultural produce sold (kg): The average volume of sales JENGA II promoted crops are Maize (140 kg), cassava (315 kg), groundnuts (56.7 kg), beans (33.6kg), rice (267.5), banana (143.8 kg). Almost a third, 30.6%, of farmers sold maize followed by cassava (25.8%), beans 19.8%, and groundnuts (17.9%). Rice and banana accounted for (1.6%) each showing that in relative terms, farmers sold more food crops than cash crops.

Average volume of agricultural produce sold

| | N | Minimum | Maximum | Average |
|-----------|----|---------|---------|---------|
| Maize | 77 | 5 | 1950 | 140.14 |
| Cassava | 58 | 0 | 1500 | 315.10 |
| Groundnut | 45 | 0 | 560 | 56.73 |
| Beans) | 50 | 0 | 200 | 33.62 |
| Rice | 4 | 0 | 900 | 267.50 |
| Banana | 4 | 0 | 500 | 143.75 |

The percent of farmers who participated in post-harvest value chain activities in the most recent growing season as expressed by joint sales with other farmers is 35.9% of those farmers who reported they sold crops.

| | | Value Chain activities | | Total |
|-------|--------|------------------------|------------------|--------|
| | | Joint sale | Single and joint | |
| Sex | Male | 6 | 4 | 10 |
| | Female | 22 | 46 | 68 |
| Total | | 28 | 50 | 78 |
| | | 35.9% | 64.1% | 100.0% |

Access to Financial Services

Of the 252 farmers surveyed, (34.5%) of farmers were female farmers who used financial services (credit, savings, insurance) in the most recent growing season while (11.5%) were male farmers. While about one in three (30.7%) reported they saved money, access to credit services is low as only (16.2%) of farmers used financial services (credit, savings, insurance) in the most recent growing season. The survey reveals that (15.1%) reported they have self-insured while (84.5%) said they purchased agricultural insurance.

Access to agricultural credit, in cash or in kind in the recent planting season

| | Frequency | Valid Percent | Cumulative Percent |
|---------|-----------|---------------|--------------------|
| Yes | 39 | 16.2 | 16.2 |
| No | 202 | 83.8 | 100.0 |
| Total | 241 | 100.0 | |
| Missing | 11 | | |
| Total | 252 | | |

Saving levels in the most recent season

| | Frequency | Valid Percent | Cumulative Percent |
|---------|-----------|---------------|--------------------|
| Yes | 74 | 30.7 | 30.7 |
| No | 167 | 69.3 | 100.0 |
| Total | 241 | 100.0 | |
| Missing | 11 | | |
| Total | 252 | | |

Agricultural insurance in the most recent season

| | Frequency | Valid Percent | Cumulative Percent |
|--------------|-----------|---------------|--------------------|
| Self-insured | 36 | 15.1 | 15.1 |
| Purchased | 202 | 84.9 | 100.0 |
| Total | 238 | 100.0 | |
| Missing | 14 | | |
| Total | 252 | | |

3.3. Health, Nutrition and WASH

JENGA's SO2 covers health, WASH and nutrition sector activities related to household food security. Its primary aim of SO2 activities is to identify and ameliorate the root causes of chronic malnutrition and illness in children under five through improved maternal, infant and child health and nutrition behaviors, increasing awareness of, and access to, the formal health care system, water and sanitation infrastructure improvements, nutrition diversification initiatives. The annual survey interviewed 585 (Fizi (181=31%), Kalehe (261=45%), Uvira (143=24%) women with the average age of 29 years ranging between 15 and 83 years and of whom (90.9%) are married, (4.8%) widowed and (2.9%) separated, and (1.4%) never married. The survey shows (97.2%) of the respondents were aged between 15 and 49 years. Nine out of ten are occupied in household management and farming, with 5% involved in trading and the other 5% comprise other activities such as hairdressing.

Marital Status

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|---------------|-----------|---------|---------------|--------------------|
| Valid | Married | 532 | 90.9 | 90.9 | 90.9 |
| | Separated | 17 | 2.9 | 2.9 | 93.8 |
| | Widowed | 28 | 4.8 | 4.8 | 98.6 |
| | Never Married | 8 | 1.4 | 1.4 | 100.0 |
| | Total | 585 | 100.0 | 100.0 | |

Almost half of the respondents (50.4%) can read or write. The survey found 85.6% of the respondents were caregivers of children under two years and (13.1%) of them live in a household with soap and water at a hand washing station.

I. Health

About 95% said they have been pregnant, (93.2%) have given birth to a child and (86.5%) saw someone for antenatal care, almost all of whom (60.5%) saw nurse/midwife, (43.8%) saw a doctor, auxiliary midwife (9.3%) and CHW (1.4%) and TBA (0.6%). The percentage of mothers of children age 0-23 months who had four ANC visits when they were pregnant of the youngest child is (53.6%). The survey points out that 79.3% of caregivers recalled taking their children under the age of years to an appropriate health provider for the most recent episode of ARI symptoms. When children had an illness with a cough, (43%) have trouble breathing or breathe faster than usual with short, fast breaths and 79.3% of their caregivers sought advice from health practitioner such as nurse (49.2%), doctor (19.5%), auxiliary nurse (13%), and trained Community Health Worker (CHW) (6.9%). The survey also indicates (55.8%) of caregivers recall that their child had fever, (17.4%) were treated with an effective anti-malarial drug within 24 hours for the most recent episode of fever. Of the 59.5% of children under five who had diarrhea, in the two weeks prior to the survey and (66.8%) received treatment with home-made ORS or and (37.2%) received prepackaged ORS.

II. WASH

JENGA II promotes WASH activities through the Participatory Hygiene and Sanitation Transformation (PHAST) process. The PHAST 7 step approach helps people to feel more confident about themselves and their ability to take action and make improvements in their communities. Three in four (74.8%) said they use public tap as their main source of potable water, followed by protected spring water (8.6%) and protected public well (6%).

The survey indicates (28.8%) of households are using an improved drinking water and (31.3%) of households using an improved toilet facility. That is the use of types of toilets, (67.5%) reported the use of Pit latrines, (19.3%) pit latrines with slab, (6.5%) ventilated pit latrines, and (5.5%) other or none of the proposed types. Other improved facilities such as septic tank, piped systems and composting toilets were not considered in this survey.

Main source of drinking water for household members

| | Frequency | Valid Percent | Cumulative Percent |
|-----------------------------|-----------|---------------|--------------------|
| Public tap | 433 | 74.8 | 74.8 |
| Tube well/borehole | 4 | .7 | 75.5 |
| Protected well in yard/plot | 5 | .9 | 76.3 |
| Protected public well | 35 | 6.0 | 82.4 |
| Protected Spring | 50 | 8.6 | 91.0 |
| Other (specify) | 8 | 1.4 | 100.0 |
| Total | 579 | 100.0 | |
| Missing data missing | 6 | | |
| Total | 585 | | |

Using types of toilet

| | Frequency | Valid Percent | Cumulative Percent |
|-------------------------|-----------|---------------|--------------------|
| Pit Latrine | 395 | 67.5 | 67.5 |
| Ventilated Pit latrines | 38 | 6.5 | 74.0 |
| Pit latrines with slab | 113 | 19.3 | 93.3 |
| Other | 7 | 1.2 | 94.5 |
| none | 25 | 4.3 | 98.8 |
| No permission | 2 | .3 | 99.1 |
| Data Missing | 5 | .9 | 100.0 |
| Total | 585 | 100.0 | |

Hand washing places

| | Frequency | Valid Percent | Cumulative Percent |
|---|-----------|---------------|--------------------|
| Inside/within 10 paces of the toilet facility | 69 | 11.8 | 11.8 |
| Inside/within 10 paces of the kitchen/cooking place | 38 | 6.5 | 18.3 |
| Elsewhere in home or yard | 27 | 4.6 | 22.9 |
| Outside yard | 5 | .9 | 23.8 |
| No specific place | 363 | 62.1 | 85.8 |
| data missing | 83 | 14.2 | 100.0 |
| Total | 585 | 100.0 | |

One in six (16.7%) of the respondents said they have no specific place to do hand washing, and (11.8%) practice hand washing inside or within 10 paces of the toilet facility. Only (50.3%) said water was available at the place of hand washing (46.9%) show that there was bar soap, detergent or liquid soap at the place of hand washing with (35.4%) use locally used cleansing agents.

III. NUTRITION

JENGA II focusses on pregnant and lactating women (PLW) in the project target area with a regular ration to increase their current diet to the daily-recommended caloric intake level. Pregnant and lactating women are targeted to promote optimal growth of their soon-to-be born child and infants, protect their own nutrition during their pregnancy, and post-partum to ensure adequate quality of breast milk production - essential for the proper growth of infants and young children.

Caregivers reported that almost all (98.6%) of children aged 0-6 months have been breastfed, (96.4%) were breastfed the previous day, and (85.1%) did not consume other than breastfeeding (plain water or infant formula) during day or at night, of these (44.4%) represent female children and (56.6%) represent male children. The average number of food groups consumed by women aged 15-49, is 3.15 with a maximum of 9 food groups. The average child dietary diversity score (CDDS) for children 6- 23 months of age is 2.88. The maximum reported score was 8. Three in four (75%) of caregivers reported 1-4 food groups consumed by their children. Nine food groups were considered in this annual survey. The percentage of children 6-23 who were breastfed at the time of the annual survey was (40.6%). The percentage of children 6-23 months receiving a minimum acceptable diet minimum is estimated at (4.92%).

According to FANTA project, dietary diversity - the number of different food groups consumed over a given period - is a proxy indicator for at least the following reasons.

- A more diversified diet is an important outcome in and of itself.
- A more diversified diet is associated with a number of improved outcomes in areas such as birth weight, child anthropometric status, and improved hemoglobin concentrations
- A more diversified diet is highly correlated with such factors as caloric and protein adequacy, percentage of protein from animal sources (high quality protein), and household income. Even in very poor households, increased food expenditure resulting from additional income is associated with increased quantity and quality of the diet.

3.4. GENDER EMPOWERMENT

The third strategic objective (SO3) women's socio-economic empowerment in food insecure households and communities. JENGA II promotes promote income generating activities (IGAs) that contribute to increased and diversified income streams of women.

The annual survey shows the percentage of women using appropriately at least one of non- agricultural IGA's strategies promoted by the project (brick production) is (64.6%). The percentage of women managing at least one of the IGA promoted by the project is (28.9%).

The percentage of women in the beneficiary communities aged 15-49 who experienced physical violence from an intimate partner in the past 12 months 24.05%.

Over two third (64.6%) responded that they have been involved in a decision making of local community organization. (95.9%) have participated in a literacy program and 68.7% can write or read.

Over three quarter (75.6%) reported that labor saving techniques have reduced their workload. The percentage of women using at least one labor saving skills promoted by the project is (70.3%).

IV. APPENDIX References

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